

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 24 OCT 2005

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| Applicant's or agent's file reference 509028 DIS/gld | FOR FURTHER ACTION | | See Form PCT/IPEA/416 |
| International application No. PCT/NZ2004/000182 | International filing date (day/month/year) 12 August 2004 | Priority date (day/month/year) 20 August 2003 | |
| International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ A61M 16/16 | | | |
| Applicant FISHER & PAYKEL HEALTHCARE LIMITED et al | | | |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36:
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

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|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report |
| <input type="checkbox"/> Box No. II | Priority |
| <input type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI | Certain documents cited |
| <input type="checkbox"/> Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> Box No. VIII | Certain observations on the international application |

| | |
|---|--|
| Date of submission of the demand 15 June 2005 | Date of completion of the report 11 October 2005 |
| Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929 | Authorized Officer <i>D. Melhuish</i> DAVID MELHUISE Telephone No. (02) 6283 2426 |

Box No. I **Basis of the report**

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1, 3 - 8 as originally filed/furnished

pages* received by this Authority on with the letter of

pages* 2 received by this Authority on 4 October 2005 with the letter of 4 October 2005

☒ the claims:

pages as originally filed/furnished

pages* as amended (together with any statement) under Article 19

pages* received by this Authority on with the letter of

pages* 9 received by this Authority on 4 October 2005 with the letter of 4 October 2005

☒ the drawings:

pages 1/4 - 4/4 as originally filed/furnished

pages* received by this Authority on with the letter of

pages* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000182

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|--------------|-----|
| Novelty (N) | Claims 1 – 5 | YES |
| | Claims | NO |
| Inventive step (IS) | Claims 1 – 5 | YES |
| | Claims | NO |
| Industrial applicability (IA) | Claims 1 – 5 | YES |
| | Claims | NO |

2. Citations and explanations (Rule 70.7)

Claims 1 to 5:

Claims 1 to 5 meet the requirements of PCT Articles 33(2) – (4). None of the prior art documents, or obvious combination thereof, disclose a water chamber with an elongate flow tube, wherein an opening at the distal end of the flow tube is transverse to an axis of the tube, the transverse direction not being downwards. The closest art of

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has the distal opening of the flow tube facing downwards. The person skilled in the art would not consider changing the direction of the distal opening of the flow tube in the citation because the direction of the opening is essential for the device of the citation to work.

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from the inner periphery of said at least one gases port with an opening at a distal end of said flow tube being spaced from the wall of said chamber, said opening facing a direction transverse to an axis of said tube, said transverse direction not being downwards.

5 Preferably said chamber includes an inlet gases port and an outlet gases port, both said inlet gases port and said outlet gases port including a said elongate flow tube.

Preferably said chamber further includes a baffle between said opening of said inlet gases port tube and said opening of said outlet gases port tube.

10 Preferably said baffle extends from the roof of said chamber and terminates below the surface of water in said chamber when said chamber is filled to a maximum intended water level for use.

Preferably said inlet gases port and said outlet gases port includes a said elongate flow tube having an opening facing a direction transverse to an axis of said tube, said opening of said inlet flow tube and said opening of said outlet flow tube facing upwards.

15 To those skilled in the art to which the invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the scope of the invention as defined in the appended claims. The disclosures and the descriptions herein are purely illustrative and are not intended to be in any sense limiting.

BRIEF DESCRIPTION OF THE DRAWINGS

20 Figure 1 is a perspective view of a water chamber according to one preferred embodiment of the present invention.

Figure 2 is a cross sectional side elevation of the chamber of Figure 1.

Figure 3 is a perspective view of the water chamber of Figure 1, showing the inner detail of the chamber.

25 Figure 4 is a cross sectional side elevation of the chamber of Figure 1 in use with water therein and in a tilted condition demonstrating the operation of the inlet extension tube 5 in reducing the capacity for leakage through the gases inlet 3.

CLAIMS:

1. A water chamber adapted for use in conjunction with a heater base and having at least one horizontally oriented gases port in a wall thereof the improvement comprising an elongate flow tube extending into said water chamber from the inner periphery of said at least one gases port with an opening at a distal end of said flow tube being spaced from the wall of said chamber, said opening facing a direction transverse to an axis of said tube, said transverse direction not being downwards.
2. A water chamber as claimed in claim 1, wherein said chamber includes an inlet gases port and an outlet gases port, both said inlet gases port and said outlet gases port including a said elongate flow tube.
3. A water chamber as claimed in claim 2, wherein said chamber further includes a baffle between said opening of said inlet gases port tube and said opening of said outlet gases port tube.
4. A water chamber as claimed in claim 3, wherein said baffle extends from the roof of said chamber and terminates below the surface of water in said chamber when said chamber is filled to a maximum intended water level for use.
5. A water chamber as claimed in claim 2, wherein said inlet gases port and said outlet gases port includes a said elongate flow tube having an opening facing a direction transverse to an axis of said tube, said opening of said inlet flow tube and said opening of said outlet flow tube facing upwards.